

AMENDMENTS

IN THE CLAIMS:

Please amend claims 1 and 20; and cancel claims 14-19, and 25 as provided below:

1. (Currently Amended) A computer readable medium comprising executable instructions that make up a layered network device driver system, operably stored and executable on configured to interface with a host computer system having an operating system, storage means memory, and a processor, the layered network device driver system further comprising:

an operating system dependent module in the network device driver system configured to ~~translate commands from the operating system~~ communicate in[[to]] an ~~format independent of the operating system~~ dependent format[[,]] to initiate sending of transmit data ~~in an operating system dependent format~~ and to provide received data ~~in an operating system dependent format~~;

an operating system independent module in the network device driver system configured to communicate with the operating system dependent module ~~in an operating system independent format~~ and perform processing on requests ~~from the operating system dependent module~~ and error checking on the transmit data and the received data ~~in a manner that is independent of the operating system~~;

a network device independent module in the network device driver system and comprising encoding that is compatible across multiple network devices, the network device independent module configured to communicate specific network device information to the operating system independent module, wherein the specific network device information is communicated ~~in a network device format that is independent of a network device associated with the host computer system~~, place the transmit data in one or more transmit descriptor rings[[,]] and obtain the received data from one or more receive descriptor rings that reside in the host computer system, ~~and selectively append the transmit or receive data with optional parameters; and~~

a network device dependent module in the network device driver system and configured to communicate with the network device independent module and with the one or more network devices and controlling the one or more network devices to send the transmit data from the one or more transmit descriptor rings and to receive the received data into the one or more receive descriptor rings, and ~~provide information to the network device dependent module that facilitates the sending and transmitting of data.~~

2. (Previously Presented) The system of claim 1, wherein the network device dependent module is operable to configure and initialize one or more registers of the network device.

3. (Currently Amended) The system of claim 1,
wherein the network device independent module is operable to selectively
append the transmit or receive data with optional parameters; and
wherein the network device dependent module is operable to verify that the optional parameters comply with capabilities of the network device.

4. (Original) The system of claim 1, wherein the operating system dependent module is operable to receive a packet to be transmitted from the operating system in an operating system specific format.

5. (Original) The system of claim 4, wherein the operating system dependent module is further operable to convert the packet into an array based data structure, wherein the data structure comprises virtual pointers to one or more data buffers.

6. (Previously Presented) The system of claim 5, wherein the operating system independent module is operable to convert the virtual pointers of the array based data structure into physical pointers, and

operable to communicate with a plurality of operating system dependent modules associated with a respective operating system.

7. (Previously Presented) The system of claim 6, wherein the network device independent module is operable to attach the one or more data buffers to a transmit descriptor, wherein the transmit descriptor is of the one or more transmit descriptor rings.

8. (Previously Presented) The system of claim 1, wherein the network device independent module is operable to access one or more data buffers of a packet associated with a received frame along with optional information, and
operable to communicate with a plurality of network device dependent modules associated with a respective network device.

9. (Previously Presented) The system of claim 8, wherein the network device dependent module is operable to analyze the packet and optional information for status, and
determine if the packet is less than a predetermined size limit with respect to a coalescing size, and if so, coalesce the packet and buffers with one or more other packets and buffers.

10. (Original) The system of claim 9, wherein the operating system dependent module analyzes the packet for errors.

11. (Original) The system of claim 10, wherein the operating system dependent module is further operable to provide the packet to the operating system.

12. (Previously Presented) The system of claim 1, further comprising a message block format for transferring packets between the operating system and the operating system dependent module for receive operations, the message block comprising:

- a mandatory parameter that includes one or more virtual pointers to one or more data buffers that contain data for a received frame; and
- an optional parameter pointer that points to one or more optional parameters.

13. (Original) The system of claim 12, wherein the one or more optional parameters respectively include a type, a size, and one or more parameters.

14-19. (Canceled)

20. (Currently Amended) A method of transmitting a frame using a host computer system, the method comprising:

- obtaining a packet to be transmitted from an operating system in the host computer system;
- converting the packet into an array based data structure that is independent of the operating system;
- converting a virtual memory address of the array based data structure that reference one or more data buffers that store the packet into a physical memory address[[es]];
- identifying logically contiguous data buffers associated with virtual memory addresses of the array based data structure that store the packet and converting the virtual address into a single physical memory address[[es]];
- attaching the one or more data buffers to a transmit descriptor;
- attaching optional information to the transmit descriptor by an operating system independent module;
- transmitting the packet by a network device; and
- freeing the one or more data buffers for other use after transmitting the packet.

21. (Original) The method of claim 20, wherein the packet is obtained from the operating system by an operating system dependent module in an operating system specific format.

22. (Previously Presented) The method of claim 20, further comprising coalescing the one or more data buffers into contiguous memory space dependent on a predetermined buffer size.

23. (Original) The method of claim 20, further comprising attaching the freed data buffers to a send queue for packets awaiting transmission.

24.-25. (Canceled)